

X4A SAFETY CHECKLIST			BROOKHAVEN NATIONAL LABORATORY NATIONAL SYNCHROTRON LIGHT SOURCE
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Original signatures on file.

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- ☐ 1. Valid Padlock Index and log, no padlocks open.

FOR CHECK POINTS 2 THRU 30 GO ON THE X3 SIDE OF BEAMLINE

- ☐ 2. Bremsstrahlung shield (BS #1) in place and banded. See photo #1
- ☐ 3. Exclusion Zone (EZ #1) located after the Bremsstrahlung shield (BS #1). See photo #1
- ☐ 4. Exclusion Zone (EZ #2) starting after the Vat valve #1A. See photo #1
- ☐ 5. Bremsstrahlung shield (BS # 2) in place and banded. See photo #2
- ☐ 6. Exclusion Zone (EZ #3) located after the Bremsstrahlung shield (BS #2). See photo #2
- ☐ 7. Vacuum Bellows #1 wrapped in lead. See photo #2
- ☐ 8. Bremsstrahlung shield (BS # 3) in place and banded. See photo #3
- ☐ 9. Exclusion Zone (EZ #4) located after the Bremsstrahlung shield (BS #3). See photo #3

10 AND 11 ARE VISIBLE FROM THE WINDOW ON THE X4C HUTCH

- ☐ 10. Bremsstrahlung shield (BS # 4) in place and banded.
- ☐ 11. Exclusion Zone (EZ #5) located after the Bremsstrahlung shield (BS #4).
- ☐ 12. Exclusion Zone (EZ #6) preceding the Bremsstrahlung shield #6. See photo #4
- ☐ 13. Vacuum Bellows #3 wrapped in lead. See photo #4
- ☐ 14. Viewport #1 must see "lead glass" label on the housing. See photo #4
- ☐ 15. Water cooled Beryllium window #1 wrapped in lead. See photo #4
- ☐ 16. Bremsstrahlung shield (BS # 6) in place and banded. See photo #5
- ☐ 17. Lead Exclusion Zone (EZ #7). See photo #5
- ☐ 18. Exclusion Zone (EZ #8).
- ☐ 19. Vacuum Bellows #4 wrapped in lead. See photo #6
- ☐ 20. Water cooled step-slit wrapped in lead. Viewport 2 & 3 covered in leaded glass. See photo #6
- ☐ 21. Bremsstrahlung shield (BS # 7) in place and banded. See photo #6
- ☐ 22. Exclusion Zone (EZ #9). See photo #6
- ☐ 23. Viewport 4, 5, and 6 on the Kohzu monochromator must have a "lead glass" label on the housing. See photo #7
- ☐ 24. Viewport #7 must see "lead glass" label on the housing. See photo #8
- ☐ 25. Shielding flange at the end of the kohzu monochromator must be lead wrapped. See photo #8
- ☐ 26. Bremsstrahlung shield (BS # 8) in place and banded. See photo #8
- ☐ 27. Vacuum Bellows #5 wrapped in lead. See photo #8
- ☐ 28. Viewport #8, 9 on the mirror tank must have a "lead glass" label on the housing. See photo #9
- ☐ 29. Viewport #10, 11 must see "lead glass" label on the housing. See photo #10
- ☐ 30. Water cooled Beryllium window #2 wrapped in lead. See photo #10

NOW MOVE ON THE X5 SIDE, INTO THE 4C HUTCH

- ☐ 31. Bremsstrahlung shield (BS # 5) in place and banded.
- ☐ 32. Exclusion Zone (EZ #10).

NOW OUT OF THE X4C HUTCH AND MOVE TO THE KOHZU MONOCHROMATOR

- ☐ 33. Two lead shielding in the back of the kohzu monochromator. See photo #11
- ☐ 34. Viewport #12 must see "lead glass" label on the housing. See photo #11

Checked by: _____ Date: _____

OPCO: _____ Date: _____